What is claimed is:

1. A laser apparatus, comprising:

a laser source;

an optical system for guiding laser beams emitted from the laser source onto a top surface and a back surface of an object to be treated; and

a stage for holding the object,

wherein the laser apparatus further comprises a reflector disposed between the object and the stage, and the laser beams to be guided to the back surface of the object are reflected at the reflector prior to arrival at the back surface of the object.

2. An apparatus according to claim 1, wherein the reflectance of the reflector with respect to the laser beams is in the range of 20 to 80%.

3. An apparatus according to claim 1, wherein the laser beams are reshaped by the optical system to have a linear cross-section.

4. A laser apparatus, comprising:

a laser source; and

an optical system for guiding laser beams emitted from the laser source onto a top surface and a back surface of an object to be treated,

wherein the optical system includes a filter for attenuating either one of an energy density of the laser beams to be guided to the top surface of the object and an energy density of the laser beams to be guided to the back surface of the object.

5. An apparatus according to claim 4, wherein the laser beams are reshaped by the optical system to have a linear cross-section.

6. A method of laser annealing comprising:

irradiating a first laser light to a top surface of an object; and

irradiating a second laser light to a back surface of the object,

wherein an effective energy intensity I_o of the first laser light to be applied onto the top surface is set at a level different from an effective energy intensity I_o' of the second laser light to be applied onto the back surface.

7. A method according to claim 6, further comprising the step of linearly reshaping the first and second laser lights.

8. A method according to claim 6, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

9. A method of laser annealing comprising:

irradiating a first laser light to a top surface of an object; and

irradiating a second laser light to a back surface of the object,

wherein an effective energy intensity I_o of the first laser light to be applied onto the top surface and an effective energy intensity I_o' of the second laser light to be applied onto the back surface satisfy the relationship of $0 < I_o'/I_o < 1$ or $1 < I_o'/I_o$.

10. A method according to claim 9, further comprising the step of linearly reshaping the first and second laser lights.

11. A method according to claim 9, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

12. A method of laser annealing, comprising the steps of:

generating laser lights from a laser source used as an oscillating source; and

irradiating a top surface and a back surface of an object with the laser lights,

wherein the laser lights to be applied onto the back surface of the object are reflected at a reflector disposed on the back

surface side of the object prior to arrival at the back surface of the object.

13. A method according to claim 12, further comprising the step of linearly reshaping the first and second laser lights.

14. A method according to claim 12, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

15. A method of laser annealing, comprising the steps of:

generating laser lights from a laser source used as an oscillating source; and

irradiating a top surface and a back surface of an object with the laser lights,

wherein the laser lights to be applied onto the back surface of the object are reflected at a reflector disposed on the back surface side of the object prior to arrival at the back surface of the object, and

an effective energy intensity I_o of the laser beams to be applied onto the top surface is set at a level different from an effective energy intensity I_o' of the laser beams to be applied onto the back surface.

16. A method according to claim 15, further comprising the step

of linearly reshaping the first and second laser lights.

17. A method according to claim 15, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

18. A method of laser annealing, comprising the steps of:

generating laser lights from a laser source used as an oscillating source; and

irradiating a top surface and a back surface of an object with the laser lights,

wherein the laser lights to be applied onto the back surface of the object are reflected at a reflector disposed on the back surface side of the object prior to arrival at the back surface of the object, and

an effective energy intensity I_o of the laser beams to be applied onto the top surface and an effective energy intensity I_o' of the laser beams to be applied onto the back surface satisfy the relationship of $0 < I_o'/I_o < 1$ or $1 < I_o'/I_o$.

19. A method according to claim 18, further comprising the step of linearly reshaping the first and second laser lights.

20. A method according to claim 18, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor

film.

21. A method of laser annealing, comprising the steps of:

generating a laser light from a laser source used as an oscillating source;

dividing the laser light into a first laser light and a second laser light through an optical system;

irradiating a top surface of an object with the first laser light; and

irradiating a back surface of the object with the second laser light.

22. A method according to claim 21, further comprising the step of linearly reshaping the first and second laser lights.

23. A method according to claim 21, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

24. A method of laser annealing, comprising the steps of:

generating a laser light from a laser source used as an oscillating source;

dividing the laser light into a first laser light and a second laser light through an optical system;

irradiating a top surface of an object with the first laser

light; and

irradiating a back surface of the object with the second laser light,

wherein an effective energy intensity I_o of the first laser light to be applied onto the top surface is set at a level different from an effective energy intensity I_o' of the second laser light to be applied onto the back surface.

25. A method according to claim 24, further comprising the step of linearly reshaping the first and second laser lights.

26. A method according to claim 24, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.

27. A method of laser annealing, comprising the steps of:

generating a laser light from a laser source used as an oscillating source; and

dividing the laser light into a first laser light and a second laser light through an optical system;

irradiating a top surface of an object with the first laser light; and

irradiating a back surface of the object with the second laser light,

wherein an effective energy intensity I_o of the first laser

light to be applied onto the top surface and an effective energy intensity I_o' of the second laser light to be applied onto the back surface satisfy the relationship of $0 < I_o'/I_o < 1$ or $1 < I_o'/I_o$.

28. A method according to claim 27, further comprising the step of linearly reshaping the first and second laser lights.

29. A method according to claim 27, wherein the object is an amorphous semiconductor film or a microcrystalline semiconductor film.